



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,759	08/31/2001	Junko Ami	213504US2RD	9942
22850	7590	12/14/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			WIN, AUNG T	
			ART UNIT	PAPER NUMBER
			2645	

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/942,759	AMI ET AL.	
<b>Examiner</b>	<b>Art Unit</b>	2645	
Aung T Win			

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_\_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-22 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 31 August 2001 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____ .

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: Transmission device Y mentioned in Paragraph 35 does not include in Figure 1. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4, 5, 6, 11, 19, 21 are rejected under 35 U.S.C. 102 (b) as being anticipated by Callaway U.S. Patent 6,275,500 B1.

2. Regarding Claims 1 and 21, Callaway discloses a broadcast type service system using communications according to Bluetooth specification, the system comprising:

at least one transmission device (at least one of a plurality of communication devices acting as slaves capable of communication with the master and capable of communication with at least another one of the plurality of communication devices); a reception information providing device (a transceiver operating as master); and a plurality of reception devices (a plurality of communication devices acting as slaves)

[Column 5, Line 10-17]

each transmission device (a first slave of the plurality of communication devices) having: a transmission device communication unit (Transceiver 50) [Figure 15] configured to carry out communications with the reception information providing device (Master communication device) and the reception devices (a plurality of communication devices acting as slaves) (configured to transmit a communication request to the master communication device to carry out communication with the reception devices) and a transmission device control unit (Processor 58) [Figure 15] configured to control the transmission device communication unit to transmit application data (data packets) to at least one reception device (a second slave of the plurality of communication devices) and to transmit (transmit to request) a reception establishing information of each transmission device (communication resource parameter such as frequency, modulation, protocol, data rate, etc.) [Column 3, Line 50-52 and Line 63-67] which is necessary for a reception device to receive the application data transmitted from each transmission device [Figure 13] [Column 5, Line 9-39] [Column 7, Line 19-46];

the reception information providing device (Master communication device) having: a reception information providing device communication unit (Transceiver acting as master) configured to carry out communications with each transmission device (a first slave of the plurality of communication devices) and the reception devices (the plurality of slaves communication devices); and a reception information providing device control unit (Processor 58) configured to control the reception information providing device communication unit to receive the reception establishing information (communication resource parameter such as frequency, modulation, protocol, data rate, etc.) of each transmission device transmitted from each transmission device (to receive acknowledgement of the reception establishing information from a first slave of the plurality of communication devices), and to transmit the reception establishing information of a specified transmission device to a prescribed reception device (to transmit the reception establishing information assigned to a first slave of the plurality of communication devices to a second slave of the plurality of communication devices) [Column 3, Line 26-30] [Figure 13] [Column 5, Line 9-39] [Column 7, Line 19-46]; and each reception device having (a second slave of the plurality of communication devices): a reception device communication unit (Transceiver) configured to carry out communications with each transmission device and the reception information providing device; and a reception device control unit (processor) configured to control the reception device communication unit to receive the reception establishing information of one transmission device (a first slave of the plurality of communication devices) transmitted from the reception information providing device (master communication

device), and to receive the application data (data packet) transmitted from said one transmission device according to the reception establishing information of said one transmission device (according to the reception establishing information assigned to a first slave of the plurality of communication devices) [Figure 13] [Column 5, Line 9-39] [Column 7, Line 19-46].

3. Regarding Claim 19, which is a method claim corresponding to Claim 1 is rejected for the same reasons as stated above because the claimed steps read on the corresponding means on Claim 1.

4. Regarding Claim 4, Callaway discloses all the limitations in Claim 1 and further discloses the acknowledgement step initiated by master communication device necessary for the two communication devices agreement to the parameters assigned by the master communication devices [Column 3, Line 56-67]. Therefore, it is inherent for the reception information providing device to compare service specification comparison between two communication devices and to control the communications at an acceptable communication level between two communication devices.

5. Regarding Claim 5, Callaway further discloses that the transmission device control unit of each transmission device is also configured to control the transmission device communication unit to transmit the application data (data packets) even when there is no reception device (second slave of plurality of communication devices) that is

carrying out communications with each transmission device (a first slave of plurality of communication devices) in an active mode according to the Bluetooth specification (a first slave of plurality of communication devices communicates a second slave of plurality of communication devices in parked mode) [Column 3, Line 30-32].

6. Regarding Claim 6, Callaway further discloses that the reception device control unit is also configured to control the reception device communication unit to receive the application data (data packets) transmitted from said one transmission device (a first slave of plurality of communication devices) according to the reception establishing information of said one transmission device (according to the assigned resource parameters of a first slave of plurality of communication devices such as frequency, modulation, protocol, data rate, etc), only when communications in an active mode according to the Bluetooth specification cannot be carried out with said one transmission device (transmission device carry out transmission only in parked mode) [Column 3, Line 30-32].

7. Regarding Claim 11, Callaway discloses that the reception information providing device communication unit (master communication device) receives the request of the reception establishing information of each transmission device by carrying out communications according to the Bluetooth specification (Standard Bluetooth 1.0) with each transmission device [Column 3, Line 42-45].

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 3, 7-10, 12, 17, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Callaway in view of Haartsen.

8. Regarding Claims 2 and 3, Callaway discloses all the limitation in the Claim 1. Callaway further discloses the programmable processor integrated in Bluetooth Tranceiver 50 [Figure 15]. Therefore it is inherent in the reception information providing device to have either a memory unit to store the reception establishing information received by the reception device communication unit for the processor to process in accordance with the reception establishing information or to have a plurality of memory units configured to separately store the reception establishing information of a plurality of transmission devices (transmission devices from different piconets) by the reception device communication unit.

9. Regarding Claims 7, 8, 17 and 18, Callaway discloses that the reception establishing information that indicates (communication resource parameter such as frequency, modulation, protocol, data rate, etc.) as describes in Claim 1. Although Callaway teaches that all devices in the same Piconet are synchronized to the same

hopping sequence (hopping pattern) and each piconet is identified by a different frequency hopping sequence [Column 1, Line 55-60], Callaway does not clearly disclose the reception establishing information indicates the phase and clock of transmission device and Bluetooth device.

Haartsen clearly discloses the ad-hoc wireless network in which master and slave units establish communication by the address (Bluetooth address) of master unit, which determines the hopping sequence and the system clock in the master transceiver unit which determines the phase in the hopping sequence [Column 11, Line 31-47]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made that reception establishing information received by the reception device indicates a hopping pattern, Bluetooth device address, a phase and clock of transmission device as taught by Haarten to establish communication between transmission and reception device.

10. Regarding Claim 9, Callaway discloses that the reception establishing information that indicates (communication resource parameter such as frequency, modulation, protocol, data rate, etc.) as describes in Claim 1. Although Callaway teaches that all devices in the same Piconet are synchronized to the same hopping sequence (hopping pattern) and each piconet is identified by a different frequency hopping sequence [Column 1, Line 55-60]. Callaway does not clearly disclose the reception information providing device communication unit transmits the reception

establishing information of the specified transmission device that indicates a Bluetooth device address of the specified transmission device, a clock offset between the specified transmission device and the reception information providing device, and a clock of the reception information providing device at a time of transmitting the reception establishing information to the prescribed reception device.

Haartsen discloses master communication means and slave communication means [Figure 12] [Column 20, Line 63-67] [Column 21, Line 1-18] to generate the hop frequencies at appreciate times (synchronized to the same hopping sequence) based on the master address and determination of the clock difference (clock offset) between the master clock and slave clock after connection has been established (link establish procedure known to one skilled in the in ad-hoc wireless network art in which master determine the slave Bluetooth device address). Haartsen further discloses bridge unit C participating in different piconets 603 and 605 acting as a bridge between the source unit A in the piconet 603 and destination unit B in piconet 605 [Figure 6b] [Column 14, Line 21-53]. Haartesen clearly teaches that bridge unit comprises two transceiver units, each establish connection with unit A and unit B separately and information is transferred back and forth between two transceiver with bridge unit C by inquiry process which determine the unit addresses of both piconet 603 and piconet 605, and control information. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify reception providing device in Callaway as taught by Haartsen so that the reception information providing device communication unit transmits the reception establishing information of the specified transmission device

that indicates a Bluetooth device address of the specified transmission device, a clock offset (time difference) between the specified transmission device and the reception information providing device, and a clock of the reception information providing device at a time of transmitting the reception establishing information to the prescribed reception device to establish connection between the transmission and reception device in different piconets.

11. Claim 10 is rejected for the same reason described above in Claim 9 since clock offset is the function of a clock of the specified transmission device at a time of transmitting the reception establishing information from the specified transmission device to the reception information providing device and a clock of the reception information providing device at a time of receiving the reception establishing information from the specified transmission device.

12. Regarding Claim 12, Callaway discloses all the limitations in the Claim 1 but does not disclose the reception information providing device communication unit carry out communication with each transmission device by communications different from the Bluetooth specification.

Haartsen discloses the ad-hoc wireless network in which master and slave units establish communication by means of a virtual frequency hopping channel whose hopping sequence is a function of the master address, and whose phase is a function of

the master clock [Abstract]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Callaway as taught by Haartsen to carry out data communication different from communications according to the Bluetooth specification with each transmission device to operate in different existing data network to provide mechanisms for efficient distribution of data packets.

Claims 13-16, 20, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Callaway .

13. Regarding Claim 13 and 22, Callaway discloses a broadcast type service system (Bluetooth communication system) [Figure 2] using communications according to Bluetooth specification, the system comprising:

at least one transmission device (at least one of a plurality of communication devices acting as slaves capable of communication with the master or master communication device); and a plurality of reception devices (a plurality of communication devices acting as slaves or master communication device) [Figure 14];

each transmission device (at least one of a plurality of communication devices acting as slaves capable of communication with the master) having: a transmission device communication unit (Transceiver 50) [Figure 15] configured to carry out communications with the reception devices (configured to set up communications with a plurality of communication devices acting as slaves); and a transmission device control unit (processor 58) [Figure 15] configured to control the transmission device communication

unit to transmit application data (data packets) to at least one reception device, and to transmit a reception establishing information of each transmission device (a set of communication resource parameters) which is necessary for a reception device to receive the application data transmitted from each transmission device; and each reception device (master communication device) having: a reception device communication unit (Transceiver 50) [Figure 15] configured to carry out communications with each transmission device (one of a plurality of communication devices acting as slaves capable of communication with the master); and a reception device control unit (processor 58) [Figure 15] configured to control the reception device communication unit to receive the reception establishing information of one transmission device (a set of communication resource parameters) transmitted from said one transmission device (slave capable of communication with the master) by carrying out communications in an active mode (carry out communication on a first communication resource operating in unparked mode) according to the Bluetooth specification with said one transmission device, and to receive the application data transmitted from said one transmission device according to the reception establishing information of said one transmission device when communications with said one transmission device is switched from the active mode to a park mode according to the Bluetooth specification [Column 6, Line 40-47]

Callaway does not disclose transmission device is switched from the active mode to a park mode for the reception device to receive application data transmitted from transmission device however Callaway disclose that communication devices are

arranged to receive application data in both active mode and park mode [Column 3, Line 16-22]. Callaway further teaches the use of programmable processor to operate in accordance with the invention in which communication is established between devices in active mode and to receive application data in both active mode and park mode [Column 2, Line 65-67] [Column 7, Line 8-10]. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention was made to program the processor as taught by Callaway to switch the transmission device from the active mode to park mode for the reception device to receive application data transmitted from the transmission device to control an indefinite number of communicating slaves within network [Column 3, Line 17-18].

14. Regarding Claim 20, which is a method claim corresponding to Claim 13 is rejected for the same reasons as stated above because the claimed steps read on the corresponding means on Claim 13.

15. Regarding Claim 14, Callaway discloses the step wherein the transmission device control unit of each transmission device is also configured to send an inquiry to one reception device that is carrying out communications in the active mode with each transmission device (a request for communication), the inquiry inquiring whether said one reception device is a device capable of switching to communications in the park mode or not (whether capable of communication in park mode on the second

communication resource), receive a response to the inquiry from said one reception device, store information on the response, (acknowledgement whether reception device is capable of communicating on the second communication resource) and switch communications with said one reception device from the active mode to the park mode according to stored information on the response (switching one reception device from the active mode to the park mode for communication on the second communication resource) [Column 3, Line 56-67].

16. Regarding Claim 15, Callaway discloses the system of claim 13, wherein the transmission device control unit of each transmission device is also configured to control the transmission device communication unit to transmit the application data even when there is no reception device that is carrying out communications with each transmission device in an active mode according to the Bluetooth specification (communication devices are carrying out communications in parked mode).

17. Regarding Claim 16, Callaway discloses the system of claim 13, wherein the reception device control unit is also configured to control the reception device communication unit to receive the application data transmitted from said one transmission device according to the reception establishing information of said one transmission device (according to the assigned resource parameters of a first slave of plurality of communication devices such as frequency, modulation, protocol, data rate, etc), only when communications in an active mode according to the Bluetooth

specification cannot be carried out with said one transmission device (transmission device carry out transmission only in parked mode) [Column 3, Line 30-32].

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

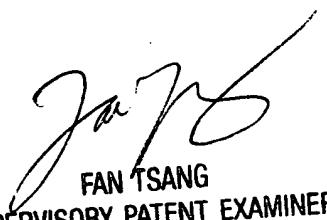
Haartsen et al.	Patent No.: U.S. 6,570,857 B1
Haartsen	Patent No.: U.S. 6,754,250 B2
Van Valkenburg et al.	Patent No.: U.S. 6,775,258 B1
Larsson et al.	Patent No.: U.S. 6,751,200 B1
Ohlenbusch et al.	Pub. No.: U.S. 2002/0091785 A1
Fritz et al.	Pub. No.: U.S. 2002/0051184 A1

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aung T Win whose telephone number is (703) 605-4306. The examiner can normally be reached on 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on (703) 305-4895. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aung T. Win  
Group Art Unit 2645  
December 9, 2004



FAN TSANG  
SUPervisory PATENT EXAMINER  
TECHNOLOGY CENTER 2600